

KUPRIYENKO, I.V.

Preventing washouts. Put' 1 put.khoz. 8 no.4:32-33 '64. (MIRA 17:4)

1. Nachal'nik moscispytatel'noy stantsii Donetskoy dorogi.

KUPRIYENKO, I.V.

Effect of six-axle cars on the track. Put' i put. khoz. no.5:  
27 My '59. (MIRA 12:8)

1. Nachal'nik mostoispytatelnoy stantsii, g. Stalino, Donetskoy  
dorogi.

(Railroads--Cars) (Railroads--Track)

KUPRIYENKO, I.V.

Replacement of bridge spans. Put'i put.khoz. 5 no.5:36 Ky '61.  
(MIRA 14:6)

1. Nachal'nik mostoispytatel'noy stantsii Donetskoy deregi, g. Staline.  
(Railroad bridges)

DANILOV, N.S. (Novosibirsk); KUPRIYENKO, P.L. (Novosibirsk);  
MALININ, N.I. (Novosibirsk); RABOTNOV, Yu.N. (Novosibirsk);  
SHUBIN, I.A. (Novosibirsk)

Program-controlled machine for investigating deformations  
of plastics under complexly stressed state conditions. Izv.  
AN SSSR. Mekh. i mashinostr. no.6:20-24 N-D '63.

(MIRA 17:1)

KUPRIYENKOV, V.A.

Mechanization of maintenance operations. Put' 1 put.khoz. 4 no.11:  
8-11 N '60. (MIRA 13:12)

1. Starshiy dorozhnyy master po mekhanizatsii, st. Klin, Oktyabr'skoy  
dorogi.

(Railroads—Maintenance and repair)

KUPRIYEV, N., kapitan 2 ranga

With experience comes also resolution. Starsh.-serzh. no.4(7):  
6 Ap '61. (MIRA 14:7)

(Naval education)

KUPRIYEVICH, V.A. [Kuprievych, V.A.]; YEGOROV, Yu.P. [Ehorov, IU.P.];  
DYADYUSHA, G.G. [Diadiusha, H.H.]

Electron interaction of allyl derivatives of elements of the IV  
group. Dop. AN URSR no.4:508-510 '64. (MIRA 17:5)

1. Institut khimii polimerov i monomerov AN UkrSSR. Predstavleno  
akademikom AN UkrSSR A.I.Brodskim [Brodskiy, O.I.].

DYADYUSHA, G.G.; KUPRIYEVICH, V.A.

Theory of the self-consistent field for the state with open shells. Teore.. i eksper. khim. 1 no.3:406-408 My-Je '65.  
(MIRA 18;9)  
1. Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR, Kiyev.



KUPRIYEVICH, V.A. [Kuprievych, V.A.]

Mean energy in the generalized Hartree-Fock method. Dop. AN URSR  
no.8:1028-1030 '65. (MIRA 18:8)

1. Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR.

DYADYUSHA, G.G. [Dyadusha, G.G.]; ZUPPYLAKH, V.A. [Zuppylakh, V.A.]

Theory of a self-consistent field in multi-configuration approximation. Dop. AN URSR no. 2-164-166 '65. (MIRA 1849)

1. Institut khimii vysokomolekulyarnykh soeyineny AN UkrSSR.

BETEKHIN, A.G. [deceased]; GOLIKOV, A.S.; STRECH, V.F.; IVANOV,  
G.A.; KARYAKIN, A.Ye.; FERYUKOV, V.V.; KOLIKOV, I.G.;  
NAGAKIYAN, I.G.; STROIA, I.A.; TATARULOV, I.M.;  
CHERNOVICH, Ye.D.; SMIRNOV, V.I., rotsenzent

[Course in mineral deposits] Kurs razrabotki i polucheniya  
iskopnykh. Izd. 3., perer. i dop. Moskva, Nedra, 1964.  
589 p. (MIRA 16:7)

ACC NR: AT6014848 (N) SOURCE CODE: UR/2531/66/000/188/0003/0010

AUTHOR: Kolokolov, V.P.; Barkalova, K.N.; Kuprovich, V.V.; Kutyavin, V.A.; Simonova, R.I.

ORG: None

TITLE: On a more precise method of mapping the number of lightning flashes

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 188, 1966.  
Atmosfernoye elektichestvo (Atmospheric electricity), 3-10

TOPIC TAGS: atmospheric electricity, thunderstorm activity, lightning, ~~lightning~~  
~~atmospheric electricity~~ WEATHER MAP

ABSTRACT: The paper discusses improved methods for mapping the geographical density of lightning flashes. Lightning discharge counters with a known effective registration radius (defined as the maximum one within which all discharges are registered), were used. An expression for the effective radius, derived for wide band (2-20 kc) counters from a previously published (referenced) paper of L.G. Makhotkin, was too sensitive to its coefficient's errors; therefore, simultaneous registration with a narrow band (56-62 kc) counter was employed. Thunderstorm activity was expressed as the monthly number of discharges per 100 km<sup>2</sup> of the recording station vicinity area. Thunderstorm activity over the North Atlantic has been also evaluated from British MGG and MGS (unreferenced) radiolocation data. Dependence of thunderstorm activity, in

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ACC NR: AT6014848

form of number of discharges per 100 km<sup>2</sup> per month and also number of days with thunderstorms per month, - vs. a temperature-humidity index "te" was determined and established. The temperature-humidity index chosen was represented by the product of the temperature in °C x absolute humidity in millibars. Comments on further development are given. Orig. art. has: 2 figures, 3 formulas and 4 tables.

SUB CODE: 04/

SUBM DATE: None/

ORIG RHP: 006/

OTH REF: 007

Card 2/2

U.S. 1,173,312, 2-1-20

"Heat and Temperature Conductivity of Alloys of Silicon and Iron." Cand Tech Sci, Ural Polytechnic Inst named S. M. Pirov, Higher Education USSR, Sverdlovsk, 1955. (KL, No 10, Jan 55)

SO: Sum. No. 670, 29 Sep 55-Survey of Scientific and Technical  
Dissertations Defended at USSR Higher Educational Institutions (15)

KUPROVSKIY, B.B.

USSR/Statistical Physics - Heat

D-4

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11454

Author : Kuprovskiy, B.B., Gel'd, P.V.

Inst : Ural' Polytechnic Institute

Title : Isotherms of Heat Conduction of Silicon and Its Alloys  
with Iron at High Temperatures.

Orig Pub : Fiz. metallov i metallovedeniye, 1956, 3, No 1, 132-183

Abstract : An investigation was made of alloys, containing one to 98.8% by weight of silicon in the temperature range  $t = 100 - 950^\circ$ . The method of radial flow in a thick-walled cylinder was used. The errors did not exceed 7%. For commercial silicon (98.8% Si) the authors obtain an empirical equation for the temperature dependence of the heat conduction coefficient:  $\lambda = 0.222 - 0.368 \times 10^{-3} t + 0.219 \times 10^{-6} t^2 - 0.0018 \times 10^5 t^{-2}$ . Extrapolation to  $10^\circ$

Card 1/2

USSR/Statistical Physics - Heat

D-4

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 11454

is in agreement with data of other authors. A plot of the isotherms  $\lambda$  of the alloys Fe-Si is given. A characteristic feature of the plot is the presence of a minimum at approximately 45 to 65° Fe, with the minimum value of  $\lambda$  being quite small (at 100° it is 8 -- 10 times smaller than the  $\lambda$  of iron. Introducing small amounts of the second component reduces  $\lambda$  sharply. The effect of addition of silicon is explained by the formation of  $\alpha$ -solutions, and the effect of additions of iron, are both attributed essentially to the appearance of intermetallic Leboite phase.

Card 2/2



*Kuprovskiy, B. B.*

AID P - 4427

Subject : USSR/Heat Engineering

Card 1/1 Pub. 110-a - 7/13

Authors : Gel'd, P. V., Dr. Tech. Sci., B. B. Kuprovskiy and  
N. N. Serebrennikov, Kands. Tech. Sci. Ural Poly-  
technical Institute.

Title : Rate of temperature raise in steel at high temperatures.

Periodical : Teploenergetika, 6, 45-51, Je 1956

Abstract : Research on thermal capacity, conductivity and co-  
efficient of expansion of steel containing from 1 to  
4.4% Si at up to 1000°C is reported, with the aid of  
mathematical analyses. Results reportedly proved that  
thermal conductivity and temperature rate diminish with  
the increase of Si content in the steel. Five tables,  
4 diagrams. Sixteen Russian references, 1935-1955;  
2 English 1941, 1946; 5 German 1900-1935.

Institution : None

Submitted : No date

**"APPROVED FOR RELEASE: 08/23/2000**

**CIA-RDP86-00513R000927610017-8**

**APPROVED FOR RELEASE: 08/23/2000**

**CIA-RDP86-00513R000927610017-8"**

137-58-2-3888

*KUPROVSKIY, B.B.*

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 230 (USSR)

AUTHORS: Kuprovskiy, B.B., Gel'd, P.V.

TITLE: Thermal Conductivity of Silicon-iron Alloys at High Temperatures (Teploprovodnost' splavov kremniya s zhelezom pri vysokikh temperaturakh)

PERIODICAL: V sb.: Fiz-khim.osnovy proiz-va stali. Moscow, AN SSSR, 1957, pp 370-386. Diskus., pp 408-409

ABSTRACT: The thermal conductivity  $\lambda$  was measured by a fixed absolute method employing a radial current in a thick-walled specimen. The specimens were disk shaped and had a central aperture for an internal heater, and 4 apertures along a diameter for the measurement of the temperature. The apparatus consisted of a cylindrical furnace, within which the specimens to be investigated were inserted. The furnace was insulated at its ends by a series of ceramic disks and supplementary end heaters. An internal heater that created a heat flow was inserted through the central hole in the specimens.  $\lambda$  was calculated by means of the equation  $\lambda \approx 0.00835 IU/(t_1 - t_2)$ , where I and U are the current and the voltage in the internal

Card 1/2

# Thermal Conductivity of Silicon-iron (cont.)

heater, and  $t_1$  and  $t_2$  are the temperatures at different distances from the center of the specimen (disk). The maximum error by this method is about 7%. An experimental formula for the dependence of  $\lambda$  upon temperature for technical Si (98.8%) and for various phases of the Fe-Si system in the 100-950°C interval is presented. Extrapolation of the experimental data to 100° yields a value  $\lambda_{Si} = 0.220 \text{ cal/cm.sec.}^{\circ}$ , which is in general in good agreement with the literature data, if it be considered that the values of  $\lambda$  for technical and pure Si differ by a factor of 1.3. The  $\lambda$  isotherms of the Fe-Si system drop rapidly when up to 4% Si is added to the Fe. It is assumed that this is due to a change in the nature of the bond between the Fe and Si atoms as they pass the 4% Si content level. On the Si side, the  $\lambda$  isotherms also drop on addition of Fe, but the decline is not as sharp. In the middle range of concentrations,  $\lambda$  is low and varies comparatively little with composition. This is due to a diminution in the concentration of the valence electrons, in connection with which fact  $\lambda$  is determined primarily by the phononic constituent. Investigation of the  $\lambda$  of iron containing flake and spheroidal graphite (G) showed that in the case of flake G the  $\lambda$  of iron increased as the G content increased. Iron with spheroidal G has a lower  $\lambda$  and is virtually independent of the G content. This is explained by the fact that in the case of spheroidal G the latter is localized and, therefore, does not have a significant effect upon the  $\lambda$  of iron. Bibliography: 12 references.

Card 2/2

L.B.

1. Iron-silicon alloys—Heat conductivity--Measurement
2. Iron-silicon alloys  
—Heat conductivity--Test results

At the time of the trial, the defendant was 21 years old.

SOV/137-58-8-17634

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p.205 (USSR)

AUTHORS: Kuprovskiy, B. B., Gel'd, P. V.

TITLE. Heat Conductivity of Alloys of Silicon with Iron (Teploprovodnost' spлавov kremniya s zhelezom pri vysokikh temperaturakh)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1957, Nr 72, pp 121-133

ABSTRACT: Ref. RZhMet, 1958, Nr 2, abstract 3888

## 1. Iron-silicon alloys--Heat transfer

Card 1/1

245500

29649

S/146/61/004/004/013/015  
D201/D306

AUTHORS: Sukhanov, Ye.L., and Kuprovskiy, B.B.

TITLE: Comparison of stationary and non-stationary methods of determining thermal conductivity of nickel-chromium alloys

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priboro-stroyeniye, v. 4, no. 4, 1961, 98 - 100

TEXT: In order to determine the usefulness of regular heat regime methods for determining the thermal properties of metals at high temperatures, the authors compare two basic methods of analysis: Stationary and non-stationary methods. Both methods were used to investigate the chromium stainless steel 2X13 (2Kh13) and nichrome type X20H80 (Kh20N80). The chemical composition of the two alloys is given. The thermal conductivity  $\lambda$  of the investigated alloys was determined by the absolute method of radial thermal flux in a thick walled cylinder at the laboratories of the Department of Physics of the Polytechnic Institute, Uralsk. The experimental arrangements and methods are described by B.B. Kuprovskiy and P.V. Gel'd (Ref. 1: Card 1/3

S/146/61/004/004/013/015

Comparison of stationary and non-statio-...D201/D306

Sbornik izd. AN SSSR, 1957). All samples were prepared in the forms of 68 mm dia. discs. Two of them had a height of 25 mm. 8 thermal insulation discs (each 10 mm high) were placed on each side of the disc under investigation. The samples were heated by platinum heating elements, placed centrally in the disc in an aperture of 12 mm dia. The discs had also 4 apertures (4 mm dia.) for the thermocouples. The measurements were carried out between 100 and 900°C (one arrangement between 100-500°C, the other 500-900°C). The greatest possible relative error in determining  $\lambda$  by the stationary method did not exceed 7 %. The two-point method of D.V. Budrin and E.L. Sukhanov (Ref. 2: Metallurgiya, 1959, no. 2) was used to evaluate the temperature conductivity  $\alpha$  of the analyzed alloys. Results obtained by the two methods were compared by comparing the values of thermal conductivity. For the non-stationary method the latter was determined from  $\lambda = \alpha \cdot \gamma_{20}^{\circ}\text{C}$ . The density at 20°C  $\gamma_{20}$  and the true specific thermal capacity  $c$  were determined by experiment. The results obtained by the two methods are in good agreement with each other (deviations of the measured values from the averaging curves did not exceed 7 %), so that both methods may be recommended for

Card 2/3

Comparison of stationary and non-...

27649  
S/146/61/004/004/013/015  
D201/D306

rapid determination of thermal properties of metals at high temperature. This article was recommended by the Kafedra metallurgicheskikh pechey (Department of Metallurgical Furnaces). There are 1 table, 1 figure and 2 Soviet-bloc references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: December 13, 1960

X

Card 5/3



34163

S/196/62/000/002/015/023  
E194/E155

18.1235

AUTHORS: Sukhanov, Ye.L., and Kuprovskiy, B.B.

TITLE: The thermal conductivity and temperature conductivity of chrome-nickel alloys

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika no.2, 1962, 5, abstract 2G 40. (Tr. Ural'skogo politekhn. in-ta, v.114, 1961, 86-89).

TEXT: The thermal conductivity  $\lambda$  of stainless steel 2X13 (2Kh13) and 18X18H9T (1Kh18N9T) and also of nichrome was investigated in the temperature range 10-900 °C by the radial heat-flux method in a thick-walled cylinder and by the regular conditions method. The relationship between the thermal conductivity of steel 2Kh13 and temperature was found and practically coincides with a published value. The value of the temperature conductivity  $a$  of the alloys is calculated from experimental results and published data using the formula:

$$a = \lambda / (c_p \cdot d_{20})$$

Card 1/2

X

34163

S/196/62/000/002/015/023  
E194/E155

The thermal conductivity and ...

where  $c_p$  is the specific heat of the alloy at the given temperature and  $d_{20}$  is the density of the alloy at 20 °C. The calculations are based on the dimensions of the body at room temperature, and so  $d_{20}$  must be used and not the density at the temperature of calculation. Graphs of  $\alpha$  as a function of temperature for the alloys show that for steel 2Kh13 there are two minima on the curve corresponding to phase conversion points. However, on passing through the critical points the thermal conductivity of this steel is unaltered. The thermal and temperature conductivity of alloys 1Kh18N9T and Kh20N80 (Kh20N80), which undergo no phase conversions in the region investigated, increase in an almost linear manner with temperature. 6 literature references.

[Abstractor's note: Complete translation.]

Card 2/2

KUFROVSKIY, B.B.; GEL'D, P.V.

Heat conductivity of  $\alpha$ -titanium. Trudy Ural.politekh.inst.  
no.14:153-154 '61. (MIRA 16:6)  
(Titanium—Thermal properties)

KUPROWSKI, MARIAN

Poland/Diseases of Farm Animal. Toxicoses

2-3

Abs Jour : Ref Zhur-Biol., No 2, 1958, 2733

Author : Bubien Zenon, Kuprowski Marian, Lipanowicz Jerzy

Inst : Not given

Title : Intoxication of Horses by Rapeseed Cakes

Orig Pub : Med. weteryn., 1956, 12, No 10, 613-616

Abstract : Case of intoxication of 14 horses by rapeseed cake is described. Four of the horses died. The main symptoms of intoxication were dyspnea and colic. A pathologic-anatomical examination after an autopsy disclosed frothiness from the nostrils, pulmonary edema, about 10 liters of fluid in the thoracic cavity, and cardiac and hepatic flabbiness. A chemical analysis of the content of the gastro-intestinal tract revealed 3% of rapeseed cake.

Card 1/1

POLAND

FERTIG, Stanislaw, JASINSKA Stanislaw, KUPROWSKI, Marian, and WACHNIK, Zenon; Chair of Microbiology (Katedra Mikrobiologii) (Director: Prof. Dr. Adam SKURSKI), Chair of Epizootiology (Katedra Epizootiologii) (Director: Prof. Dr. Tadeusz SOBIECH), and the Chair of Pathological Anatomy (Katedra Anatomii Patologicznej) (Director: Prof. Dr. Aleksander ZAKRZEWSKI), all of the WSR [Wyzsza Szkola Rolnicza, Higher School of Agriculture] in Wroclaw

"Diagnosis of Listeriosis in Sheep."

Warsaw-Lublin, Medycyna Weterynaryjna, Vol 19, No 7, Jul 63, pp 386-391

Abstract: [Authors' English summary] Authors describe centers of listeriosis in sheep in areas where the disease was not previously recorded. They find that histological examinations are of great diagnostic value, and that focal, purulent inflammation of the cerebral stem appears to be a typical pathognomic characteristic of this disease in sheep. There are 26 references: 4 each Soviet and Polish, 3 Western, and 14 German.

1/1

BALBIERZ, H.; KUPROWSKI, M.; SIELICKA, B. (Wroclaw)

Isolation of the virulent *Candida albicans* strain in the course of  
enzootic *Lutreola lutreola*. Roczn. nauk roln. wet 70 no.1/4:243-244  
'60. (EEAI 10:9)

(Minks) {*Candida albicans*} (*Lutreola*)

KUPRYAKHINA, K.Z.; ZIMTSEV, P.P.; IVASHCHENKO, A.T.; KOVALENKO, M.F.; Principal  
uchastiye: MOROZOVA, N.A.; ANTIPOVA, G.G.; LEVINA, N.A.

Use of ion-exchange resins for the decontamination of waste waters.  
Koks i khim. no.7:46-47 '65. (MIRA 18:8)

1. Ukrainskiy nauchno-issledovatel'skiy uglekhimicheskiy institut  
(for Kupryakhina). 2. Rutchenskivskiy koksokhimicheskiy zavod (for  
Zimtsev, Ivashchenko, Kovalenko).

133-6-24/33

AUTHORS: Babakov, A.A., Zhadan, T.A., Danilin, V.A., Bakuma, S.F.,  
Antipov, K.I., Kul'kova, M.N. and Kupryakhina, S.Z.

TITLE: An improvement in the technology of production of high-  
chromium plates. (Uлучsheniye tekhnologii proizvodstva  
vysokokhromistogo tolstogo lista).

PERIODICAL: "Stal'" (Steel), 1957, No.6, pp.555-559 (USSR).

ABSTRACT: Optimum conditions of rolling and subsequent heat treat-  
ment of plates from steels X25T, X28 and X28 with nitrogen,  
under which the metal would attain mechanical properties  
satisfying TY5227-55 and good quality cutting and straight-  
ening properties in cold state, were investigated. The  
following participated in the work: Engineers B.Z.Kononov,  
V.V.Turitsyn, P.N.Sporyshkov, A.P.Okenko ("Krasnyy Oktyabr")  
and technician V.I.Shashina (TsNIICHM). It was found that  
in order to obtain steel plates of required properties  
slabs should be rolled in a temperature range from 980 to  
1000 C - 720 to 800 C with cooling of plates in air.  
Thermal treatment: a preliminary annealing at 760-780 C for  
12-16 hours followed by hardening of each plate (individ-  
ually) in water after heating the metal to the same tem-  
perature (soaking time 3 min per 1 mm thickness of the  
plate). Chemical composition of steel from the heats

Card 1/2



An improvement in the technology of production of high-chromium plates. (Cont.) 133-6-24/33

investigated is given in Table 1, mechanical properties of plates tested in Tables 2 to 6 and some examples of microstructure obtained under various conditions of processing in Figs. 2 to 4.

There are 6 tables and 4 figures.

ASSOCIATION: TsNIChM and "Krasnyy Oktyabr'" Works. (TsNIChM i zavod "Krasnyy Oktyabr'").

AVAILABLE: Library of Congress  
Card 2/2

KISELEV, A.A., inzh.; LAPSHOVA, M.P.; KUL'KOVA, M.N.; V rabote prinimali  
uchastiye: KUPRIYAKHINA, S.Z., inzh.; KARTSIN, Yu.A., inzh.  
ZHELUDEVA, O.S., inzh.

Smelting roller-bearing steel in acid furnaces using natural  
gas and fuel oil [with summary in English]. Stal' 18 no.1:35-40  
Ja '58. (MIRA 11:1)

1. Zavod "Krasnyy Oktyabr'" (for Kiselev, Lapshova, Kul'kova).  
(Smelting) (Bearing metals)

ZVEREV, M Ye.; KUPRYAKOV, B.G.; LYBIN, I.V.

Stand for agitating graduated flasks. Lab. delo 10 no.4:251-252  
'64. (MIRA 17:5)

1. Gosptal'naya terapevticheskaya klinika (zaveduyushchiy - prof.  
A.A.Kovelevskiy) Tomskogo meditsinskogo instituta.

MILLER, O.G.; KUMBYAKOV, Yu.P.; ABDEYEV, M.A.; MIKHAYLOV, N.I.

Reducing losses of copper with waste slags at the Karsakpay  
plant. Trudy Akad. Nauk Kazakh. SSR 11:3-9 '61.

(MIRA 14:8)

(Karsakpay—Copper industry) (Smelting furnaces)

KUPRYAKOV, Yu.P.; MILLER, O.G.; SAMKOV, Ye.A.

Use of an air-oxygen blow in the reverberatory smelting of copper concentrates. TSvet. met. 38 no.9:27-31 S '65.

(MIRA 18:12)

EDDYARD, Y.P., MILLER, O.G.

Use of oxygen in reverberatory smelting of copper concentrates.  
Izv. AN Uz. SSR. Ser. tekhn. nauk 8 no.5:78-80 '64.

(MIRA 18:2)

1. Sredneaziatskiy filial Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metallov.

BOCHKAREV, L.M.; BYKHOVSKIY, Yu.A., kand. tekhn. nauk; KUPRYAKOV, Yu.P.;  
KOSTERIN, V.V.; PARETSKIY, V.M.

Pilot plant testing of the smelting of copper sulfide  
concentrates in suspension with an oxygen blow. Sbor. nauch.  
trud. Gintavetmeta no.23:115-126 '65. (MIRA 18:12)

KUPRYANOV, V. V.

"Distribution of network, methods of observation and estimation of evaporation from water surface."

report submitted for Intl Symp on Design of Hydrological Networks, Quebec, 15-22 June 1965.



KUPRYACHIN, N.N.:

KUPRYACHIN, N.N.: "The hydraulics of the eddy pump". Moscow, 1955. "In  
Higher Education USSR. All-Union Correspondence Power Engineering Inst.  
(Dissertations for the Degree of Candidate of Technical Sciences).

SO: Knizhnaya letopis' No 44, 29 October 1955. Moscow.

122-4-3/29

AUTHOR: Kupryashin, N.N., Candidate of Technical Sciences and  
Kovalenko, V.G., Candidate of Technical Sciences.

TITLE: The present state of the theory and methods of design of  
vortex pumps (Sovmennoe sostoyanie reorii i metodov  
rascheta vikhrevykh nasosov.)

PERIODICAL: "Vestnik Mashinostroeniya" (Engineering Journal), 1957,  
No.4, pp. 20 - 28 (U.S.S.R.)

ABSTRACT: The various names given to the vortex pump in world  
literature are compared. The name "Vortex" pump is consid-  
ered the most suitable, because it describes their principle  
of action. These centrifugal pumps with a lateral ring  
channel around the periphery are used mainly in the region of  
small specific speeds (4 - 50) where ordinary centrifugal  
pumps are inapplicable because of low efficiency, difficulty  
of manufacture, or absence of self-priming qualities. With  
the same impeller diameter and r.p.m. the vortex pump yields  
a head 3 - 5 times greater than the centrifugal pump. It is  
therefore used for high pressure (25 - 250 m) at comparative-  
ly low flows (2-60 m<sup>3</sup>/hr). Three types of vortex pumps are  
in use. In the first, the peripheral side channel is "blind"  
whilst the suction and pressure ports are at a radius smaller  
than the side channel. In the second and third types with a

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The present state of the theory and methods of design of vortex pumps. (Cont.)

122-4-3/29

unilateral or bilateral open peripheral side channel the ports are situated directly at the beginning and the end of the channel, though sometimes the suction port is situated at a smaller radius. Only the first type of vortex pump possesses the property of self-priming. The theory of the vortex pump as developed by three Russian and two U.S.A. investigators is critically reviewed. B.I. Nakhodkin ("Investigation of the vortex pump in water". Dissertation, Moscow Power Institute, Moscow, 1951) visualised the vortex pump pressure consisting of the ordinary centrifugal pressure plus a vortex pressure resulting from the transfer of energy by the fast moving particles of liquid in the impeller cells to the slowly moving particles of liquid in the channel, this transfer being associated with the formation and decay of vortices in the working portion of the lateral channel.. No analytical theory of existing pumps has been developed, and the pressure coefficient as well as the various design parameters are found from graphs and tables. The American investigations by Iverson ("Performance of the periphery pump", Trans. ASME, Vol.77, No.1, 1955) and 2/5 Wilson (Santalo, M.A. and Oelrich, J.A. "A theory of the fluid - dynamic mechanism of regenerative pumps" Trans. ASME, Vol.77,

The present state of the theory and methods of design of vortex pumps. (Cont.)

122-4-3/29

No.8, 1955) are based on the hypothesis of an increased mass of liquid in the side channel owing to shear stresses which arise in the flow due to an interaction between the impeller and the liquid. They adopt the theory that the liquid particles in the side channel move along spiral (helical) trajectories. Their analytical formulae for the outlet pressure, power and efficiency are reproduced but are not considered practically usable.

Design work, analysis of the working process, and tests carried out at the "Krasnyy Fakel" plant lead to the distinction between the main vortex and subsidiary vortices arising as a result of fluid flow around the vane edges, roughness, and other causes. In a correctly designed pump the main vortex should be predominant..The entrainment of the liquid mass by the impeller motion is accompanied by a partial or full decay of the vortices, their deformation or "shear". This vortex deformation or decay causes shear stresses in pumps with a lateral channel of semi-circular cross-section, vortices with an axis normal to this cross-section arise most easily and vortices with other axes are most likely to be suppressed, when the impeller blades are thin and their number is large. Following the senior author's dissertation (Kupryashin, N.N. "The hydrodynamics of the vortex pump"

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The present state of the theory and methods of design of vortex pumps. (Cont.)

122-4-3/29  
Dissertation, Moscow Power Institute, Moscow, 1955) the theory of the pump is developed for a type of fluid motion described by a coil wrapped around a wheel. This one-dimensional theory, with the help of momentum equations is developed for an ideal fluid and leads to the basic equation of the vortex impeller from which the pressure developed can be determined in relation to all the design parameters of the wheel. Pressure-volume, power and efficiency graphs are reproduced for several Soviet designs and compared with calculated graphs from the formula, showing good agreement. Guidance for the application of vortex pumps is given as follows: liquid viscosity below 5<sup>o</sup> Engler, size of mechanical impurities up to 0.1 mm, head per impeller between 1 and 200 m, flow between 0.1 and 17 l/sec, maximum efficiency 45%, minimum weight per kW, 2 kg, speed up to 6 000 r.p.m. The determination of the main design parameter from the basic formula is discussed in detail. The cross-section of the side channel has a large effect on the properties of the pump. With increasing cross-sectional area, the pressure becomes smaller and the characteristic curve flatter. The effects of the number of blades, of an open or enclosed impeller design, of forward facing or backward facing blades are

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5/5 The present state of the theory and methods of design of  
vortex pumps. (Cont.)

discussed.

122-4-3/29

There are 10 figures, including 5 graphs, and 13 references,  
7 of which are Slavic.

AVAILABLE:

KUPRYASHIN, N. N.

122-2-3/33

AUTHORS: Kovalenko, V.G. and Kupryashin, N.N., Candidates of Technical Sciences.

TITLE: Modern Designs of Vortex and Centrifugal-Vortex Pumps  
(Sovremennyye konstruktsii vikhrevykh i tsentrobezhno-vikhrevykh nasosov)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, No.2, pp. 10-16 (USSR)

ABSTRACT: Enclosed vortex pumps were produced by Soviet industry in larger numbers than open vortex pumps, typical abroad. Enclosed pumps have a steeper pressure volume characteristic, better efficiency and stronger impeller vanes. Their greater susceptibility to cavitation has led to the development of centrifugal-vortex pumps with a centrifugal stage preceding the vortex stage. A typical design, designated UPC-53, is illustrated in cross-section and its cavitation properties are shown in a graph (Fig.2). The centrifugal stage permits a range of speeds up to 6 000 r.p.m. A series of sizes of single impeller, centrifugal-vortex pumps has been brought out for petrol engine driven pumping units. The provision of a self-priming device in the shape of a separating dome is illustrated (Fig.4) and discussed. The study of separating dome design has shown that an increase in dome size and the raising of the liquid level in it increase the intensity of suction. However,

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122-2-3/33

### Modern Designs of Vortex and Centrifugal-Vortex Pumps

various designs of dampers above the pressure port and the choice of an optimum velocity of flow through the priming port can increase the suction without increasing the dome size. Wire mesh dampers have proved effective. Vortex stages should be relieved of radial stresses. The design of an unloading ring developed by the "Krasnyy Fakel" plant is illustrated in Fig. 5. The wheel has two concentric vane rings, and the housing, corresponding working channels. These constitute two stages in series and raise the liquid head up to 120 m. Another solution is shown in Fig. 6, where the wheel has cantilever vanes. Its advantages are discussed in detail. The same principle is incorporated in another pump (Fig. 9) for high-pressure duties. The cantilever vanes make it possible to embody a hydraulically well-designed flow system from the centrifugal stage to the vortex stage. The overall efficiency reaches 36%. The loss of pressure (and efficiency) due to the priming dome is computed and found to reach 15%. To reduce the pressure losses due to the sudden widening of the flow passage, a spiral outlet can be designed similar to that of centrifugal pumps. Further design ideas are discussed. The combination of a centrifugal and vortex wheel in parallel to

Card 2/3



122-2-3/33  
Modern Designs of Vortex and Centrifugal-Vortex Pumps  
achieve a self-priming pump is illustrated, but the series  
design is advocated. The design of a pump housing incorporating  
two suction and two pressure port (Fig. 13) is shown, which  
permits doubling the suction head.  
There are 13 figures and 3 Russian references.

AVAILABLE: Library of Congress

Card 3/3

KUPRYASHIN, N.M., kand. tekhn. nauk.

Analytic determination of the disk-friction coefficient in the turbulent zone. Energomashinostroyeniye 4 no.8:17-19 Ag '58. (MIRA 11:11)  
(Hydraulics)

KUPRYASHIN, N.N., kand.tekhn.nauk; MYAGKOV, D.Ya., inzh.

Improving the design of hydraulic screw tools. Trakt. i sel'khoz mash.  
no.11:46-48 N '58. (MIRA 11:11)  
(Hydraulic machinery)

*KUPRYASHIN, N.N.*

KOVALENKO, V.G., kand. tekhn. nauk; KUPRYASHIN, N.N., kand. tekhn. nauk.

Modern designs of vortex and centrifugal vortex pumps. Vest. mash.  
38 no.2:10-16 P '58. (MIRA 11:1)

(Pumping machinery)

KUPRYASHIN, N.N., kand. tekhn. nauk; MYAGKOV, D.Ya., inzh.

Aspects of the development of assembly work mechanization. Vest.  
mesh. 38 no. 4:19-23 Ap '58. (MIRA 11:3)  
(Screwdrivers)

SOV/122-59-6-23/27  
AUTHOR: Kupryashin, N.N., Candidate of Technical Sciences

TITLE: Two-speed Hydraulic Screw Motor Nut Driver

PERIODICAL: Vestnik mashinostroyeniya, 1959, Nr 6, pp 82-85 (USSR)

ABSTRACT: Following the example of the English "Desoutter" 2-speed pneumatic nut driver, in which the sudden increase of torque resistance on reaching the tightening position produces a gear shift into slow, high-torque operation, the hydraulics laboratory of the NII Traktorospel'khoz mash has developed two-speed hydraulic screw motor nut drivers, type UGR-10, namely, with a mechanical or a hydraulic reducing gear, respectively. Except for the reducing gear, other components are identical. The single-speed hydraulic driver (Figure 1), previously described by the author and others (Ref 1) has a screw-type hydraulic motor with a central rotor and two idlers connected to the driving spindle through a two-step reduction gear. The mechanical two-speed variant (Figure 2) has a torque limiting coupling connecting directly the hydraulic motor spindle with the driving spindle and a free-wheel clutch between the gear and

Card1/3

SOV/122-59-6-23/27

Two-speed Hydraulic Screw Motor Nut Driver

pinion of the cluster assembly forming the second and third gear of the four-gear reducing gear-train. The torque limiting coupling is of the cone friction type. At high speed, the pressure loss in the channel to the hydraulic motor causes increased tightening of the cone. At low speed, the sliding proceeds at reduced cone pressure. The free-wheel clutch is of the roller type. The hydraulic reducing gear variant (Figure 4) contains, in place of the gear train, a vane rotor coupled to the driving spindle through a free-wheel clutch. In high-speed operation, the nut driving spindle is directly driven by the hydraulic screw motor. When the spindle is braked on reaching the tightening position of the nut, a spool valve inside the spindle is displaced against a spring and oil appears on the pressure side of the vane, thus creating the tightening torque. The vane rotor drives the nut driving spindle through the free-wheel clutch. The rotational speed of the nut driving spindle drops by the ratio of the vane area to the corresponding hydraulic motor screw area and so a hydraulic speed reduction is achieved. After completion of

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SOV/122-59-6-23/27

Two-speed Hydraulic Screw Motor Nut Driver

nut tightening, the spool valve spring restores the valve to the initial position and thereby returns the vane to its initial position. The author favours the mechanical reducing gear for small units with a relatively low reduction ratio (2.5 - 7). For high torque and large ratios (about 20) the hydraulic reducing principle yields a more compact unit. There are 4 figures and 2 references, of which 1 is Soviet and 1 English.

Card 3/3



KUPRYASHIN, N.N., kand.tekhn.nauk; MYAGKOV, D.Ya., inzh.

Multiple-spindle hydraulic nut driver. Trakt. i sel'khozmasb.  
no.8:38-40 Ag '59. (MIRA 12:11)  
(Bolts and nuts)

KUPRYASHIN, H.N., kand. tekhn. nauk

Hydrohelical pump and vibrator. Stroi. i dor. mash. 7 no.4:  
28-30 Ap '62. (MIRA 16:7)

(Vibrators)

KUPRYASHKIN, Ye.A.

Using novocaine in some diseases of the ear, nose, and throat.  
Vest. oto-rin. 19 no.1:111 Ja-F '57 (MLRA 10:4)

1. Iz kafedry bolezney ukha, gorla i nosa (zav.-prof. A.Kh.  
Min'kovskiy) Chelyabinskogo meditsinskogo instituta.  
(NOVOCAINE) (OTORHINOLARYNGOLOGY)

KUPRYASHINA, Z.I.

Eye injuries from 1947 to 1958 data of the ophthalmological  
outpatient department of the S.V. Ochapovskii Krasnodar  
Clinical Hospital. Vestn. oftal. 76 no.4:56-58 Л-Аг'63  
(MIRA 17:1)

KUPRYJANCZYK, Boguslaw, inz. (Opole)

Welding of medium and low pressure steam pipelines. Gasp paliw  
11 no.10:389 0 '63.

KUPIXJANCZYK, B.

The management of electric power in the cement industries. p. 231.  
(Cement, Wapno, Gips, Krakow, Vol. 12, no. 10, Oct. 1956.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

KUPRYK, Lech, mgr inz.; KUBIAK, Stefan, inz.

Survey of production of the Electric Lamp Assembly Equipment  
Works. Wiad elektrotechn 30 no.5:170-172 My '62.

POLAND/Organic Chemistry - Natural Compounds and Their  
Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54118  
Author : Kupryshevsky, Sokolovskaya  
Inst :  
Title : New Methods for Esterification of Amino Acids.  
Orig Pub : Acta biochim. polon., 1957, 4, No 2, 85-92

Abstract : New methods for a direct esterification of amino acids (AA) and their N-acyl derivatives were developed. To a solution or a weighed amount of 0.1 mole of an AA in 1.2-2 moles of an aliphatic alcohol, 0.12 moles of  $\text{SOCl}_2$  at  $0^\circ\text{C}$  is added and set aside for 48 hours ( $\sim 20^\circ\text{C}$ ). After an alcohol excess has been vacuum distilled (bath temperature  $100^\circ\text{C}$ ), the ester hydrochlorides are obtained. The N-acyl-AA are esterified under the same conditions, using  $\text{SOCl}_2$  or  $\text{CH}_3\text{OCl}$ . These methods are suitable for

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POLAND/Organic Chemistry - Natural Compounds and Their  
Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54118

an AA esterification with primary or secondary alcohol (in liquid state); with tertiary alcohols, the reaction proceeds unsatisfactory.

One tenth mole of N-acyl-AA is dissolved in an anhydrous  $\text{C}_5\text{H}_5\text{N}$  and to it 0.1 mole of  $\text{C}_6\text{H}_5\text{SO}_2\text{Cl}$  is added ( $0^\circ\text{C}$ ).

After 5 minutes 0.1 mole of phenol, nitrophenol or an aliphatic alcohol is added, and the contents set aside for 2 hours ( $20^\circ\text{C}$ ) after which time they are poured into 80-100 g. of ice. The following  $\text{R}'\text{NHCHR}''\text{COOR}$  are prepared (R,R', R'' and the yield in % is given):

1) Using  $\text{SO}_2$ :  $\text{CH}_3$ , H, H, 97;  $\text{C}_2\text{H}_5$ , H, H, 98;  $\text{CH}_3$ , H,  $\text{CH}_3$ , 88;  $\text{C}_2\text{H}_5$ , H,  $\text{CH}_3$ , 92;  $\text{CH}_3$ , H,  $\text{C}_3\text{H}_7$ , 92;  $\text{C}_2\text{H}_5$ , H,  $\text{C}_3\text{H}_7$ , 89;  $\text{CH}_3$ , H, iso- $\text{C}_3\text{H}_7$ , 91;  $\text{C}_2\text{H}_5$ , H, iso- $\text{C}_3\text{H}_7$ , 85;

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POLAND/Organic Chemistry - Natural Compounds and Their  
Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54118

$C_6H_5CO$ , iso- $C_4H_9$ , 95;  $CH_3$ ,  $C_6H_5CO$ ,  $CH_2C_6H_5$ , 87;  $C_2H_5$ ,  
 $C_6H_5CO$ ,  $C_6H_5CH_2$ , 87.

3) Using  $C_6H_5SO_2Cl$ :  $CH_2C_6H_5$ ,  $C_6H_4(CO)_2$ , H, 83;  
 $C(CH_3)_3$ ,  $C_6H_4(CO)_2$ , H, 96;  $C_6H_5$ ,  $C_6H_4(CO)_2$ , H, 92;  
 $C_6H_5NO_2-P$ ,  $C_6H_4(CO)_2$ , H, 86;  $C_6H_4NO_2-O$ ,  $C_6H_4(CO)_2$ , H,  
93;  $C_6H_4NO_2-P$ ,  $C_6H_5CH_2OCO$ , H, 89.

Card 5/5

POLAND / Organic Chemistry. Natural Compounds  
and Their Synthetic Analogs.

G-3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000927610017-8

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77856.

Author : Taschner, E., Kupryszewski, G., and Liberek, B.  
Inst : Not given.  
Title : On the Selective Cleavage of Ester Groups in  
N-acylated Amino Acids and Peptides During  
Acidolysis.

Orig Pub: Roczniki Chem, 30, No 2, 643-646 (1956) (in Pol-  
ish with an English summary).

Abstract:  $C_6H_5CONHCH_2COOR$  (I), where  $R = CH_3$ ,  $C_2H_5$ ,  
 $CH(CH_3)_2$ , or  $CH_2C_6H_5$  (Ia), as well as the  
ester of the peptide [sic]  $C_6H_5CONHCH_2CONHCH-$   
( $COOCH_3$ )  $CH_2C_6H_4OH$  4 are selectively cleaved  
at the ester group at about 20° after 4-6 days

Card 1/2

POLAND / Organic Chemistry. Natural Compounds  
and Their Synthetic Analogs.

G-3

Abs Jour: Ref Zhur-Khimiya, No 23

KUPRYSZEWSKI, G.; SOKOLOWSKA, T.

New method for the esterification of amino acids. Acta biochim. polon.  
4 no.2:85-92 1957.

1. Z Katedry Chemii Ogólnej Politechniki Gdańskiej Kierownik Katedry:  
Prof. dr E. Taschner.

(AMINO ACIDS

esterification, new method (Pol))

POLAND / Organic Chemistry. Natural Substances and  
their Synthetic Analogues.

G

Abs Jour: Ref Zhur Khimiya, No 20, 1958, 67666.

Author : Taschner E., Kupryszewski G.

Inst : Not given.

Title : Overacylation. Size of Acyl Groups in the N-acyl-  
ated Amines, Aminoacids and Peptides Under the  
Influence of Organic Acids.

Orig Pub: Roczn. Chem., 1957, 31, No 2, 711-713.

Abstract: Overacylation of the esters of dibenzoylglycine  
and of hippuric acid was observed while heating  
in the presence of an acid catalyst ( $H_2SO_4$  or  $HBr$ )  
in  $CH_3COOH$  which was revealed by the evolution of

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POLAND / Organic Chemistry. Natural Substances and  
their Synthetic Analogues.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927610017-8"

Abs Jour: Ref Zhur-Khimiya, No 20, 1958, 67666.

Abstract: benzoic acid. An anological reaction was conduc-  
ted by heating acetanilide with  $C Cl_3COOH$  that  
yielded 80% of trichloroacetanilide. Application  
of this reaction to the peptides showed that N-  
-benzyl-DL-lycylglycine breaks down into N-benzoyl-  
DL-lycine (87% yield) and N-acetylglycine, while  
hippurylglycine, phthaloyl-DL-phenylalanyl-glycine  
and phthaloylglycine-DL-phenylalanine do not enter  
reaction. The described overacylation reaction  
may be presented by the following general formula:  
 $R'CONHR + R''COOH \rightleftharpoons R'CONHR + R''COOH.$

Card 2/2

SOKOLOWSKA, T.; KUPRYSZEWSKI, G.; TASCHNER, E.

New method of synthesis of peptides via N-protected symmetrical anhydrides of aminoacids. Bul Ac Pol chim 6 no.2:89-91 '58

(EPAI 9:6)

1. Department of General Chemistry, Institute of Technology, Gdansk. Communicated by T. Urbanski.

(Peptides)

(Anhydrides)

(Amino acids)

Country : Poland G-3  
 Category :  
 Abs. Jour : 45977  
 Author : Sokolowska, T., ~~Kupryczewski, G.~~ and Taschner, E.  
 Institut. : Not given  
 Title : New Method for the Synthesis of Peptides Via  
 Symmetric Anhydrides of N-Substituted Amino Acids  
 Orig Pub. : Roczniki Chem, 32, No 4, 815-819 (1958)  
 Abstract : The authors describe a new method for the synthe-  
 sis of dipeptides from tosyl- or phthalylamino  
 acids (I) and the hydrochlorides (HC) of amino  
 acid esters (II) in the presence of benzenesulfo-  
 nyl chloride (III). A mixture of 1 mmol I and  
 1-2 mmols II in 1-3 ml anhydrous C<sub>6</sub>H<sub>6</sub>N is treated  
 with 1 mmol III with cooling and left to stand  
 1-20 hrs at 20°; the reaction product is pre-  
 cipitated with water. The primary and secondary  
 components, the amounts used (in mmols), the

Card: 1/4

Country : Poland  
 Category :  
 Abs. Jour :  
 Author :  
 Institut. :  
 Title :  
 Orig Pub. :  
 Abstract : the volume of pyridine in ml, the name of the peptide, yield in %, and mp in °C are given below: phthalylglycine (Ia), HC of the methyl ester (ME) of glycine (IIa), 5,5,10, ME of phthalyl-glycyl-glycine, 75, -; Ia, HC of ME of DL-leucine, 10, 10, 10, ME of phthalylglycyl-DL-leucine, 54, 165-166 (from ethyl acetate - petroleum ether); phthalyl-DL-leucine, HC of the ethyl ester of glycine, -, 2,4, ethyl ester of phthalyl-DL-leucyl glycine, 52, -; Ia, HC of ME

Card: 2/4

Country : Poland  
 Category :  
 Abs. Jour :  
 Author :  
 Institut. :  
 Title :  
 Orig Pub. :  
 Abstract : of DL-phenylalanine (IIb), 2.5, 2.5, 5, ME of phthalylglycyl-DL-phenylalanine, 86, 125; phthalyl-DL-phenylalanine, IIa, 5,5,5, ME of phthalyl-DL-phenylalanylglycine, 90, 135-136; N, O-ditosyl-L-tyrosine (Ib), IIa, 2,4,6, ME of N, O-ditosyl-L-thyrocyglycine, 95, 75-76 (from 50% CH<sub>3</sub>OH), [α]<sub>D</sub><sup>20</sup> -16° (c = 0.6; alcohol). The synthesis probably proceeds by the formation of symmetrical I anhydrides since the authors succeeded in isolating phthalylglycine

Card: 3/4

COUNTRY : Poland G-5  
 CATEGORY :  
 ABS. JOUR. : RZKhim., No. 22 1959, No. 78750  
 AUTHOR : Taschner, E., Kupryszewski, G., and Liberek, B.  
 INST. : Not given  
 TITLE : Acidolysis. II. Investigation of the Cleavage  
 of Esters of N-Acylated Amino Acids and Peptides.  
 ORIG. PUB. : Roczniki Chem, 32, no 5, 1107-1113 (1958)  
 ABSTRACT : The authors have studied the effect of temperature, reaction time, and various organic acids and catalysts on the degree of acidolysis. The experiments were carried out in the main on esters of hippuric acid. The optimum reaction medium is glacial  $\text{CH}_3\text{COOH}$  with  $\text{HBr}$  as catalyst (1-1.5 mol per mol of ester; 4-6 days, about  $20^\circ$ ). Following distillation of the  $\text{CH}_3\text{COOH}$  and  $\text{HBr}$  under vacuum, the residue is dissolved in ethyl acetate or in ether, extracted with a

CARD: 1/4

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ABS. JOUR. : RZKhim., No. 22 1959, No. 78750  
 AUTHOR :  
 INST. :  
 TITLE :  
 ORIG. PUB. :  
 ABSTRACT : solution of  $\text{Na}_2\text{CO}_3$ , and acidified. The yield of N-acylated acids or of dipeptides is 80-90%. The authors have confirmed that the degree of cleavage is independent of the nature of the alcohol residue. The esters of N-phenyl- and N,N'-dibenzoyl-L-phenylalanine form an exception: the cleavage of the methyl ester of phenylglycine attains 89%, while that of the ethyl ester is only 55%; the ethyl ester of N,N'-dibenzoyl-L-phenylalanine is not cleaved, apparently because of steric

CARD: 2/4

TASCHNER, E.; KUPRYSZEWSKI, G.; UMINSKI, T.; BOROWSKI, M.

Investigations on the mechanism of the N-transacylation reaction  
by means of  $^{14}\text{C}$  labelled acetic acid. *Bul.Ac.Pol.chim.* 7 no.12:  
867-869 '59. (REAI 9:5)

- I. Department of General Chemistry, Technical University, Gdansk.
- II Department of Physics, Technical University, Gdansk.  
(Acylation) (Acetic acid) (Carbon) (Radioisotopes)



TASCHNER, E.; KUPRYSZEWSKI, G.

Racemization in the  $N$ -transacylation reaction and a study of its  
course by means of  $^{14}\text{C}$  acetic acid. *Bul.Ac.Pol.chim.* 7 no.12:  
871-872 '59. (EBAI 9:5)  
(Racemization) (Acylation) (Acetic acid) (Radioisotopes)  
(Carbon)

TASCHNER, E.; WASIELEWSKI, C.; KUPRYSZEWSKI, G.; UMINSKI, T.

Investigations on the reaction mechanism of O-acidolysis by means of  $^{14}\text{C}$  acetic and propionic acids. Bul.Ac.Pol.chim. 7 no.12:873-875 '59.  
(REAI 9:5)

(Acetic acid) (Propionic acid) (Hydrolysis)  
(Carbon) (Radioisotopes)

KUPRYSZEWSKI, Gotfryd; KACZMAREK, Marian

On aminoacid chlorophenyl esters. I. N-protected aminoacid 2,4,6-trichlorophenyl esters. *Rocz chemii* 35 no.4:931-936 '61.

1. Department of Organic Chemistry, Normal School, Gdansk.

KUPRYSZEWSKI, Gotfryd; FORMELA, Malgorzata

On aminoacid chlorophenyl esters. III. N-protected amino acid penta-chlorophenyl esters. Rocz chemii 35 no.5:1533-1536 '61.

1. Department of Organic Chemistry, School of Education, Gdansk.

P/528/61/001/000/005/007  
D207/D308

AUTHOR: Kupryszewski, Gotfryd

TITLE: N-shielded amino acid 1-methyl-2-acetylviny-  
esters and an attempt to use them for the  
synthesis of peptides

SOURCE: Danzig. Wyższa Szkoła Pedagogiczna. Zeszyty  
naukowe. Matematyka, fizyka, chemia, v. 1,  
1961. Danzig, 1962, 95 - 98

TEXT: N-shielded amino acid 1-methyl-2-acetylviny-  
esters were prepared by the method of Wieland and Heinke (Ann.,  
615, 184 1958) from ice-cooled pyridine solutions of N-shielded  
amino acids and acetyl acetone in the presence of phosphorus oxy-  
chloride dissolved in methylene dichloride. The esters were mixed  
of cis and trans forms. Only two of the esters (phthalyl glycine  
and phthalyl-DL-phenylalanine) were crystalline. The esters could  
be used to synthesize peptides by aminolysis. N-shielded dipep-  
tide esters were obtained from the crystalline active esters in

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N-shielded amino acid ...

P/528/61/001/000/005/007  
D207/D308

80 - 90% yields, and in 50 - 65% yields from the noncrystalline esters. The rate of aminolysis of 1-methyl-2-acetylvinyl esters was considerably greater than that of analogous phenyl esters, but the practical applications of this observation are very limited because of the difficulties of obtaining peptides in crystalline form.

ASSOCIATION:

Katedra Chemii Organicznej Wyższej Szkoły  
Pedagogicznej, Gdańsk (Organic Chemistry  
Department, Higher School of Education,  
Gdańsk)

SUBMITTED:

March 16, 1961

Card 2/2

P/528/61/001/000/006/007  
D204/D307

AUTHORS: Kupryszewski, Gotfryd and Formela, Małgorzata

TITLE: Pentachlorophenyl esters of amino acids. IV.  
The application of pentachlorophenyl esters  
of N-shielded amino acids to the synthesis of  
peptides

SOURCE: Danzig. Wyższa Szkoła Pedagogiczna, Zeszyty  
naukowe. Matematyka, fizyka, chemia, v. 1,  
1961. Danzig. 1962, 99 - 101

TEXT: This article is a continuation of previous  
studies (Roczniki Chem., 25, 931 (1961) : 25, 595 (1961) : 25,  
1533 (1961) ) in which a method for the preparation of active  
pentachlorophenyl esters (A) of N-shielded amino acids was  
developed. In the present work, the aminolysis of A was carried  
out in tetrahydrofuran or dioxan, using methyl or ethyl esters  
of other amino acids. Compounds A were found to be efficient  
acylating agents, reacting at room temperature to give 75-98%  
yields of the corresponding esters of N-shielded dipeptides.  
Card 1/2

Pentachlorophenyl esters ...

P/528/61/001/006/006/007  
D204/D307

The following compounds were obtained: the ethyl esters of carbobenzoxyglycylglycine, carbobenzoxyglycyl-DL-phenylalanine, carbobenzoxyglycyl-L-tyrosine, carbobenzoxy-DL-alanylglycine, carbobenzoxy-L-leucylglycine, carbobenzoxy-DL-phenylalanylglycine, phthalyl-DL-alanylglycine, and phthalyl-DL-leucylglycine, and the methyl esters of phthalyl-DL-phenylalanylglycine and tosyl-DL-valylglycine. The use of water-miscible tetrahydrofuran and dioxan is necessary in view of the relatively low solubility of the pentachlorophenyl esters in ethyl acetate; despite the consequent difficulties in purifying the reaction products, the method proposed is essentially very simple. There is 1 table.

ASSOCIATION: Katedra Chemii Organicznej Wyższej Szkoły  
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SUBMITTED: June 25, 1961

Card 2/2



TASCHNER, Emil; KUPRYSZEWSKI, Gotfryd

Application of the N-acidolysis reaction for cleavage of peptide bonds. Roczniki chemii 36 no.1:63-72 '62.

1. Department of General Chemistry, Institute of Technology,  
Gdansk.

KUPRYSZEMSKI, Gotfryd; PORCIELA, Malgorzata

Amino acid chlorophoryl esters. Pts. 6-7. Matem fiz chem  
Gdansk 2 127-134 '62.

1. Department of Organic Chemistry, School of Education, Gdansk.

KUPRYSZLWSKI, Gotfryd; WOJNOWSKI, Wieslaw

New esters of 4,6 dinitro-O-cresole. Matem fiz chem Gdansk  
2 143-144 '62.

1. Department of Organic Chemistry, School of Education, Gdansk,  
and Department of Inorganic Chemistry, Institute of Technology,  
Gdansk.

KUPRYSZEWSKI, Gotfryd

Depsipeptides. Pt.1. Matem fiz chem Gdansk 2 155-180 '62.

1. Department of Organic Chemistry, School of Education, Gdansk.

S/081/62/006/022/015/088  
B144/B101

AUTHORS: Sokołowski, Janusz, Kupryazewski, Gotfryd, Umiński,  
Tadeusz

TITLE: Use of compounds tagged with the radioactive carbon isotope  
 $C^{14}$  to study the conversion of N-glucosides. I. Exchange of  
acetyl groups in N-acetyl-N-2,3,4,6-tetra-O-acetyl-D-  
glucopyranosyl-p-aminoazobenzene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 153, abstract  
22Zh12 (Roczn. chem., v. 36, no. 2, 1962, 215-221 [Pol.;  
summaries in Russ. and Eng.] )

TEXT: Hydrolysis of N-acetyl-N-2,3,4,6-tetra-O-acetyl-D-glucopyranosyl-  
p-aminoazobenzene (I) leads to the formation of N-acetyl-N-D-glucopyranosyl-p-aminoazobenzene (II) and of a small quantity of N-D-glucopyranosyl-p-aminoazobenzene (III). The position of the acetyl group in I was determined on the basis of a study of the acyl exchange in I: the effect of  $C^{14}H_3COOCOCH_3$  (IV) on I leads to an exchange of the N-acetyl

Card 1/2

Use of compounds tagged with ...

S/081/62/000/022/015/088  
B144/B101

group. The mixture of 0.2 g I [ $m.p.$  199-200°C,  $[\alpha]_D^{17} + 32 \pm 3^\circ$  (c 0.402, chloroform)], 0.02 g  $ZnCl_2$ , and 0.5 ml IV (activity 0.01 mcu/ml) is kept for 4 hrs at 100°C; I with  $C^{14}$  (activity 748 imp/min per mmole) is obtained. The mixture of 0.2 g N-N-2,3,4,6-tetra-O-acetyl-D-glucopyranosyl-p-aminobenzene (V), 0.02 g  $ZnCl_2$ , and 0.5 ml IV is heated for 0.5 hr; I with  $C^{14}$  is obtained; yield 0.12 g (activity 1978 imp/min per mmole). To 107.7 mg I, produced from V, 36 mg  $(CH_3)_2NH$  dissolved in 9.5 ml  $CH_3OH$  is added, the mixture is stirred for 9 hrs at 20°C, and a mixture of II (86%) and III ( $10 \pm 4\%$ ) is obtained (the yield was determined by paper chromatography and by measuring the activity of the mixture). [Abstracter's note: Complete translation.]

Card 2/2

KUPRYSZEWSKI, Gotfryd; WOJNOWSKI, Wieslaw

On phenyl and thiophenyl esters of halogenoacetic acid.  
Rocz chemii 36 no.2:359-362 '62.

1. Department of Organic Chemistry, Normal School, Gdansk,  
and Department of Inorganic Chemistry, Institute of Technology,  
Gdansk.

KUPRYSZEWSKI, Gotfryd; KAZMIERCZAK, Ryszard

Simple method of characterizing fatty acids by p-[4-nitrophenylazo]-phenyl esters. Roczniki chemii 36 no.9:1325-1327 '62.

1. Department of Organic Chemistry, Normal School, Gdansk, and  
Department of General Chemistry, Medical Academy, Gdansk.



KURYSZEWski, Gotfryd

Depsipeptides. Pt.2. Roczniki chemii 36 no.11:1593-1598 '62.

1. Department of Organic Chemistry, Normal School, Gdansk.

KUPRYSZEWSKI, Gotfryd; FORTYLA, Halgerzata

Depsipeptides. Pt.3. Roczniki chemii 37 no.2:161-165 '63.

1. Department of Organic Chemistry, Normal School, Gdansk.

KUPRYSZEWSKI, Gotfryd

Amino acid chlorophenyl esters. Pt. 8. Roczniki chemii 37 no.5:  
593-596 '63.

1. Department of Organic Chemistry, Normal School, Gdansk.

KUPRYTE, O.

SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERIJA B. No. 2, 1958

Kupryte, O. Concerning the glandular tissue of mucous membrane of the colon of a swine. In Russian p. 207.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2,  
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GORDIYEVSKIY, A.V.; FILIPPOV, E.L.; KUPRYUMIN, G.I.

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(Hydrofluoric acid) (Ion exchange)  
(Electrodes)

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New method of characterizing N-acylated aminoacids as p-phenylazo-phenyl amides and esters. Rocz chemii 37 no.6:659-661 '63.

1. Department of Organic Chemistry, Normal School, Gdansk.

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The two-component electroresistance drilling dynamometer. Mechanik  
35 no.7:382-384 J1 '62.

1. Fabryka Wyrobów Precyzyjnych, Warszawa.

TSUKERSHTEYN, O.Ye.; KUPSIK, B.M.

Some peculiarities in the composition of the blood in diphylo-  
bothriasis in the Far North. Sov.med. 21 Supplement:7 '57.

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(MIRA 11:2)

(BLOOD--EXAMINATION)



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Some variants in the hemopoietic system in diphyllbothriasis.  
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(MIRA 12:10)

1. Iz I Leningradskogo meditsinskogo instituta imeni akad.  
I.P.Pavlova.

(TAPEWORM INFECTION, compl.

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(ANEMIA, etiol. & pathogen.

diphyllbothriasis (Rus))

POLYAK, A.B.; TATEVOSYAN, Ye.L.; KUPTSAN, N.A.; MEOS, A.I.

Changes in the conformation of cellulose links occurring during  
mercerization and pre-ripening. Khim. volok. no.4:38-41 '64.  
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1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo  
instituta iskusstvennogo volokna (for Polyak).
2. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo  
instituta iskusstvennogo volokna (for Tatevosyan, Kuptsan).
3. Leningradskiy institut tekstil'noy i legkoy promyshlennosti im.  
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1. Irkutskiy nauchno-issledovatel'skiy protivochumnyy  
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(PLAGUE)